

ABSTRACT OF THE DISCLOSURE

A lens function-including optical lens according to the present invention is constituted by: at least one step-index optical fiber; and at least one gradient index optical fiber having an outer diameter equal to that of the step-index optical fiber and having a periodic length exhibiting a lens function, the gradient index optical fiber being joined or attached to an end surface of the step-index optical fiber. The present invention is especially effective in a single mode optical fiber which is typical of the step-index optical fiber. The gradient index optical fiber can be produced by an ion exchange method.

(Fig. 1)